WE CLAIM:

1. In a capillary electrophoresis method in which analyte species are separated by differential electrophoretic migration through a fluid separation medium under the influence of a run field, an improvement for reducing peak broadening caused when the run field is established comprising:

establishing the run field at a ramp rate no greater than about 5 V/cm-s.

2. The method of **claim 1** wherein the ramp rate ranges from about 0.05 V/cm-s to about 3.0 V/cm-s.

3. The method of **claim 1** wherein the ramp rate ranges from about 0.1 V/cm-s to about 1.0 V/cm-s.

4. The method of **claim 1** wherein the fluid separation medium is a buffered solution containing a non-crosslinked polymer.

5. The method of **claim 1** wherein the fluid separation medium is a buffered solution.

6. The method of **claim 1** wherein the run field ranges from about 50 V/cm to about 3000 V/cm.

7. The method of **claim 1** wherein the analyte species are nucleic acid.

8. In a capillary electrophoresis method in which analyte species are separated by differential electrophoretic migration through a fluid separation medium under the influence of a run field, an improvement for reducing peak broadening caused when the run field is established comprising:

establishing the run field over a period of at least about ten seconds.

9. The method of **claim 8** wherein the run field is established over a period ranging from about 20 seconds to about 4000 seconds.

10. In a capillary electrophoresis method in which analyte species are separated by differential electrophoretic migration through a fluid separation medium under the influence of a run field, an improvement for reducing peak broadening associated with the establishment of the run field comprising:

establishing the run field at a ramp rate which results in a reduction in the amount of peak broadening associated with the establishment of the run field by at least about 10%.

11. In a capillary electrophoresis method in which analyte species are separated by differential electrophoretic migration through a fluid separation medium under the influence of a run field, an improvement for producing a desired reduction in the amount of peak broadening comprising:

for each of a plurality of electrophoretic runs, establishing the run field at each of a plurality of different ramp rates, at least some of which ramp rates are not greater than about 5 V/cm-s;

analyzing a degree of peak broadening observed for each run; and

selecting a ramp rate which is no greater than that which produced a desired reduction in peak broadening.

12. In a capillary electrophoresis method of the type wherein nucleic acid species are separated by differential electrophoretic migration through a fluid separation medium under the influence of a run field, the improvement comprising:

establishing the run field in a controlled manner according to a pre-defined ramp rate sufficient to increase a length of read by at least about 20 nucleotides over that achieved when the run field is not established in a controlled manner.

13. A method for performing capillary electrophoresis comprising:

providing a capillary electrophoresis channel having a lumen;

providing a flowable separation medium located in the lumen;

introducing an analyte species into the lumen;

establishing a run field within the lumen sufficient to cause the electrophoresis of the analyte species;

wherein the run field is established at a ramp rate no greater than about 5 V/cm-s.

14. In a capillary electrophoresis method in which analyte species are separated by differential electrophoretic migration through a fluid separation medium located within a capillary under the influence of a run field, an improvement for reducing peak broadening associated with the establishment of the run field comprising:

reducing a temperature of an environment surrounding the capillary during an initial electric field ramp by an amount sufficient to maintain an average temperature of the separation medium during such initial electric field ramp to within about 0.4 °C of the temperature of the separation medium prior to initiating the initial electric field ramp.

15. The method of **claim 14** wherein the temperature of the separation medium during an initial electric field ramp is maintained to within about 0.2 °C of the temperature of the separation medium prior to initiating the initial electric field ramp.

16. The method of **claim 14** wherein the temperature of the separation medium during an initial electric field ramp is maintained to within about 0.1 °C of the temperature of the separation medium prior to initiating the initial electric field ramp.

17. In a capillary electrophoresis method in which analyte species are separated by differential electrophoretic migration through a fluid separation medium located within a capillary under the influence of a run field, an improvement for reducing peak broadening associated with the establishment of the run field comprising:

reducing a temperature of an environment surrounding the capillary during an initial electric field ramp by an amount sufficient to maintain an average temperature of the separation medium during such initial electric field ramp substantially constant with respect to an average temperature of the separation medium prior to initiating the initial electric field ramp to an extent sufficient to result in a displacement of the fluid separation medium at an inlet end of the capillary during the initial electric field ramp of less than about 600 μm.

18. The method of **claim 17** wherein the displacement of the fluid separation medium during the initial electric field ramp of less than about 200 μm.

19. The method of **claim 17** wherein the displacement of the fluid separation medium during the initial electric field ramp of less than about 20 μm.

20. In a capillary electrophoresis method in which nucleic acid species are separated by differential electrophoretic migration through a fluid separation medium located within a capillary under the influence of a run field, an improvement for reducing peak broadening associated with the establishment of the run field comprising:

reducing a temperature of an environment surrounding the capillary during an initial electric field ramp by an amount sufficient to maintain an average temperature of the separation medium during such initial electric field ramp substantially constant with respect to an average temperature of the separation medium prior to initiating the initial electric field ramp to an extent sufficient to increase a length of read by at least about 20 nucleotides.

21. The method of **claim 20** wherein the temperature of the environment surrounding the capillary during the initial electric field ramp is reduced by an amount sufficient to maintain an average temperature of the separation medium during such initial electric field ramp substantially constant with respect to the average temperature of the separation medium prior to initiating the initial electric field ramp to an extent sufficient to increase a length of read by at least about 50 nucleotides.